User Manual

MagniLink PRO - Mac

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1 About LVI

LVI Low Vision International AB was founded in 1978 and is one of the world's leading manufacturers of equipment for persons with visual impairments. Development of new products takes place in close cooperation with users and professional staff within the low vision rehabilitation industry. LVI is quality-certified in accordance with ISO 9001 and environmentally-certified in accordance with ISO 14001.

The information in this manual has been carefully checked and is believed to be accurate. However, LVI assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will LVI be liable for direct, indirect, special, exemplary, incidental, or consequential damages resulting from any defect or omission in this manual. In the interest of continued product development, LVI reserves the right to make improvements in this manual and the products it describes at any time, without notice or obligation.

2 Introducing MagniLink PRO

Thank you for choosing this video magnifier. Our aim is for you to be satisfied with your choice of supplier and reading aid.

MagniLink PRO is a video magnifier designed for people with visual impairment. The video magnifier offers features including the potential to set the magnification, autofocus, several artificial colours, the option of switching the magnifier between reading mode, mirror mode and distance mode and the option of adjusting the brightness. MagniLink PRO can be connected to any monitor, a PC or a Mac. It is also possible to collapse the system when it is not being used or for transportation.

MagniLink PRO offers genuine full-HD quality. Available accessories comprise a dockable reading table, battery as well as software for OCR-processing and reading text aloud.

Table of additions to the product code MLPRO-FHD- depending on which accessories have been ordered.

A	Dockable reading table with friction brake X/Y
B	Pre-installed battery
C	Text To Speech for PC
D	Text To Speech for Mac

CE	MagniLink PRO meets all the requirements for CE marking of medical devices in accordance with Directive 93/94/EEC. Our products comply with MDD 93/94/EEC with additions from Directive 2007/47/EC.

3 Safety information

- Only use the power adaptor supplied with the product. Using an incorrect type of power adapter may cause damage to the system.
- Place the power cord in such a way that you can neither trip over it or that crush damages can occur.
- If the product is moved from the cold into a warm room, condensation (moisture) can form inside the unit or on the camera lens. To prevent problems with condensation, the apparatus should be installed in the room at least 30 minutes prior to usage.
- Never operate the product if it has been exposed to water or other liquids. Damaged or wet product can cause electric shocks or fire.
- Only use the battery supplied with the product. If the battery needs to be changed, please contact LVI.
- Be careful not to catch your fingers when collapsing your MagniLink PRO.
- When MagniLink PRO is to be moved, collapse it and lift from beneath. If MagniLink Pro has a dockable reading table, this must be anchored and locked before moving the system.
- If the system requires cleaning, pull out all cables and use a slightly damp (not wet) cloth. Use only water or a cleaning agent that is intended for monitors and computers.
- Make no further adjustments, even if the product does not function normally after following the functional descriptions. Pull out the power cable and contact service staff or the product distributor. Only use spare parts that are specified by LVI.
- Always switch off the power when the system is not being used.

If in doubt, contact your supplier.

Warning

The product is supplied packed in a plastic bag. To avoid risk of suffocation, keep the bag out of the reach of children and infants.

4 Unpacking

The system is supplied in a box with the following contents:

- Reading camera
- Power adaptor
- Carrying case
- User Guide
- USB memory stick with software
- USB cable
- HDMI to DVI cable
- HDMI to HDMI cable

Check first that the box has no external damage. In the event of damage, contact the delivery company and file a notification of damage.

Open the box and take out the MagniLink PRO; remove the packaging. For further information, please see Installation page 12.

4.1 Packaging

The packaging consists of the following packaging material (LVI recommends that the packaging be kept in case you have to return the system or you need to move it):

- Packing material (EPEL E)
- Box (corrugated cardboard)
- Polyethylene (LDPE4)

For sorting and collection of packaging material, please call the packaging collection customer service department for information on the rules that apply in your municipality.

Note that the product and its accessories must be recycled as electronic waste. A worn-out battery is recycled as electronic waste.

5 Accessories

Dockable reading table with friction brake X/Y (MLRT-XY).

Battery (ML-BAT).

LVI Monitor 19" (MLV-A103) and 23" (MLV-A104).

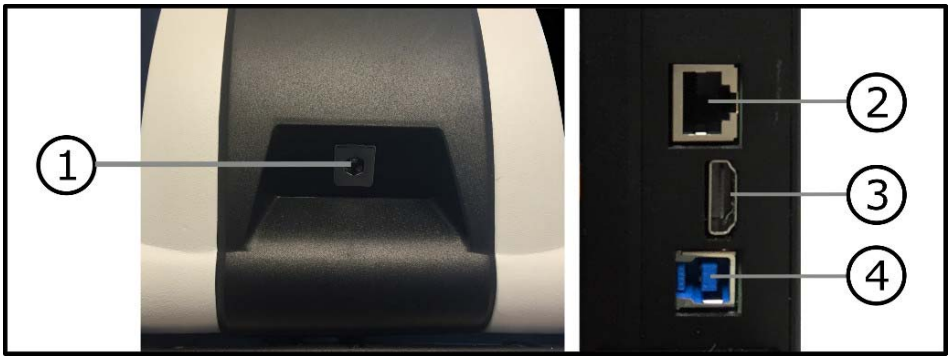
Text To Speech for PC (MLS-A102) or Mac (MLS-A102-MAC).

6 Installation

6.1 Unfolding

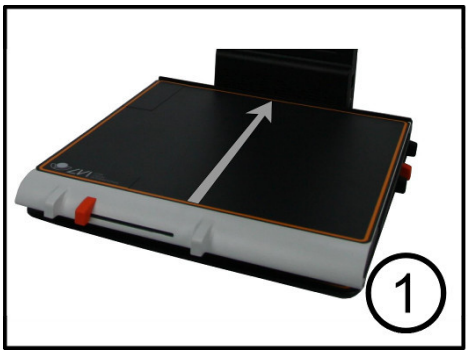
1. Place your MagniLink PRO on the table in front of your seat. Remember that the reading table can be pulled out approximately 30 cm in three directions. MagniLink PRO has a low total weight. Therefore, it is very important to place the system at least 10 cm from the edge of the table, particularly when you are using the reading table in its most extended position. Excessive load in this position can cause the system to tip over.
2. Take hold of the unit's arm and turn it upwards to the upper end point.
3. Turn up the camera arm until it clicks into place. In order to get optimal focus range when a reading table is used with the system, the camera arm must be turned up until it clicks into place once more.

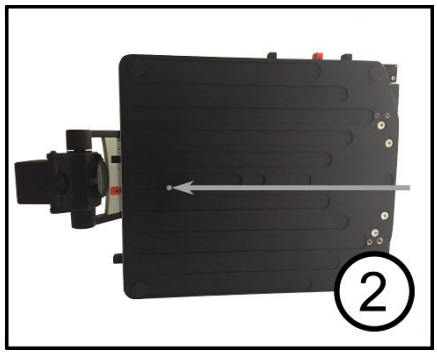
6.2 Connection



1. Power supply
   Connect the mains adapter to the socket on the rear.
2. Connection for control box
   Connect the control box to this socket.
3. HDMI connection
   Here the unit can be connected to a monitor that supports HDMI or DVI.
4. USB connection
   Used to connect the unit to a computer.

6.3 Installation of reading table

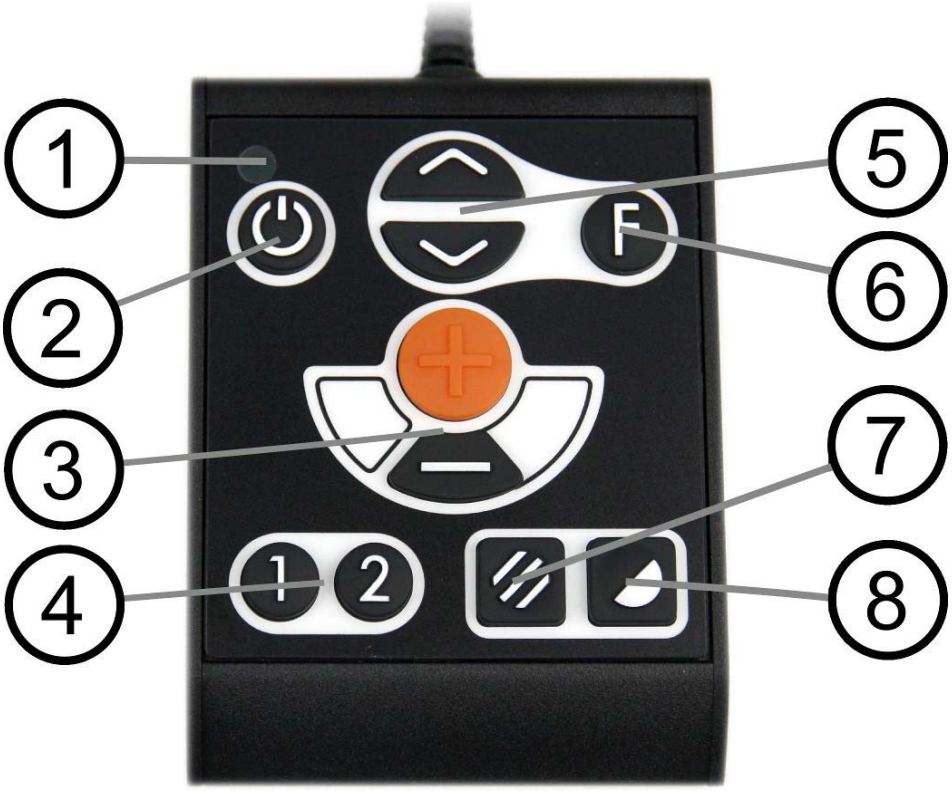




1. Install the reading table by pushing it in towards the unit.
2. In order to permanently install the reading table. Fasten the reading table securely with a screw on the underside.

7 Use

7.1 Control box



1. LED
   A green light indicates that the unit is on. A flashing yellow light means that autofocus is switched off. The light flashes green when the system is starting. A red light for five seconds when the system is starting indicates that the battery needs to be charged.
2. Power on/off
   Press to start or shut down the system.
3. Magnification control
   Used to set the magnification. To reduce the zoom, press the lower key (minus) and to increase the zoom, pressure the upper key (plus).
4. Programmable function buttons
   When the system is delivered, button 1 switches between automatic and manual focus and button 2 switches between overview mode and normal mode. It is possible to change the function of these buttons via the menu.

5. Lighting configuration or navigation control
   Used to configure the light intensity in order to optimise reading conditions. Press the upper half to increase the light intensity and the lower half to decrease it. Also used to navigate in the menu.
6. Function button
   When this button is pressed, a menu appears in which further settings can be made.
7. Picture mode
   Press the button to switch the picture mode between natural colours and grey scale.
8. High contrast mode with artificial colours
   Press the button to switch between the various colour combinations.

7.2 Menu

The menu is opened by pressing the function button. In order to navigate in the menu, press the navigation control. There thirteen main modes in the menu. The current mode is displayed on the screen. After 30 seconds of inactivity, the system returns to normal mode.

If you use the menu at the same time as the system is showing USB video on a computer. Press the short cut command to return to the program's standard values (F11 on PC and Alt + F11 on Mac). This causes the program to set the maximum window size and normal rotation, which is necessary in order for the menu to be displayed correctly.

1. Autofocus ("AF-ON" or "AF-OFF" is displayed on the screen)
   In this mode, you can press the function button to turn autofocus on and off. Autofocus off can be used when you wish to write by hand. In this way, focus is not affected by the pen or your hand.
2. Mirroring ("MIRROR" is displayed on the screen)
   In this mode, you can press the function button to mirror the image.
3. Overview ("VIEW" is displayed on the screen)
   In this mode, you can press the function button to reduce the magnification to overview mode Press the button again to restore the magnification.
4. Focus ("FOCUS" is displayed on the screen)
   In this mode, you can press the function button. When you do so, "F-SET" is displayed on the screen and it is then possible to set

the focus mode manually by pressing the navigation control. Manual focus may, for example, be useful for inspection. When this has been done, press the function button again to return to the menu.

5. Reference line/Bar ("REFLINE" is displayed on the screen)
   In this mode, you can press the function button. When you do so, "R-SET" is displayed on the screen and it is then possible to set the position of the reference line or the bar by pressing the navigation control. When you are satisfied with the position, press the function button again to save the position.
6. Lighting ("LAMP" is displayed on the screen)
   Press the function button in this mode to access the settings for the lamp's brightness. "L-SET" is displayed on the screen and it is possible to reduce or increase the brightness by pressing the navigation control. When you are satisfied with the brightness, press the function button again to return to the menu.
7. Shut-off time for screen and lamp ("SLEEP" is displayed on the screen)
   In this mode, you can set whether and after what length of time the system will turn off the lamp and the screen if the camera has not detected any movement. Press the button. It is then possible to select the time with the navigation control. When you are satisfied with the setting, press the function button again. To turn on the lamp and screen again, it is sufficient to move your hand under the camera.
8. Shut-off time ("SH-OFF" is displayed on the screen)
   It is possible to set whether and after what length of time the system will be turned off if the camera has not detected any movement. Press the button. It is then possible to select the time with the navigation control. When you are satisfied with the setting, press the function button again.
9. Programming of button 1 ("PRG-F1" is displayed on the screen)
   In this mode, you can programme which function button 1 is to have. Press the function button. It is then possible to select the function with the navigation control. When you are satisfied with your choice, press the function button again to save the setting.
10. Programming of button 2 ("PRG-F2" is displayed on the screen)
    In this mode, you can programme which function button 2 is to have. Press the function button. It is then possible to select the

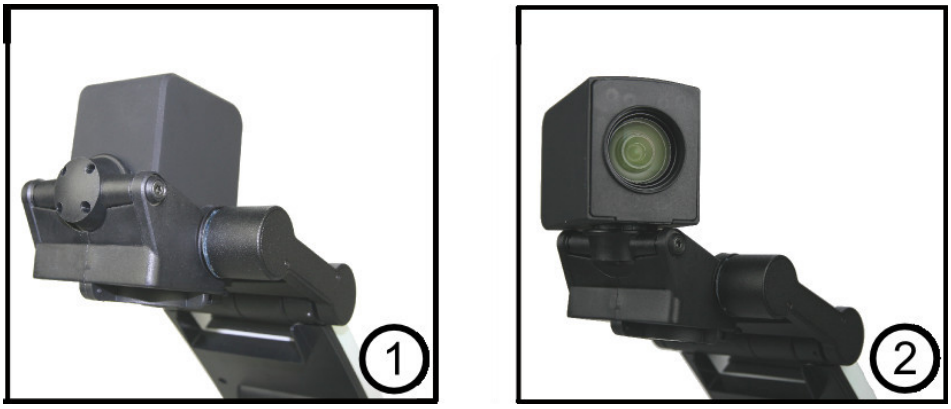
function with the navigation control. When you are satisfied with your choice, press the function button again to save the setting.

11. Battery status (Battery symbol is displayed on the screen)
    In this mode, the current battery status is displayed on the screen.
12. Language ("OSD" is displayed on the screen)
    In this mode, you can set the language in the menu. Press the function button. It is then possible to select the language with the navigation control. There are four languages: English (ENG), German (DEU), French (FRA) and Spanish (SPA). When the desired language is displayed, press the function button again to save the language setting.
13. Normal mode ("EXIT" is displayed on the screen)
    If you press the function button in this mode, you exit the menu and return to normal mode.

7.3 Reading table

1. Side way direction friction adjustment
   Set the side way friction by moving this handle. With the brake in the left end position, the reading table is unlocked. To increase friction, push the side way brake to the right (at the far right, the brake clicks into locked mode).
2. Depth way direction friction adjustment
   Set the depth way friction by moving this handle. With the brake in the near end position, the reading table is unlocked. To increase friction, push the depth way brake towards the back. Push the brake in as far as possible to lock the reading table.

7.4 Camera



The camera has two modes. Reading mode and distance mode. Turn the camera to switch it from reading mode (1) to distance mode (2). When the camera is in distance mode, it can be angled laterally, depending on what you want to look at. In distance mode, the camera can also be turned to a mirror mode. The settings for both modes are automatically saved when you switch from one to the other.

Settings that are automatically saved for these modes are:

- Negative/Positive/Natural colours
- Magnification level
- Brightness/Contrast
- Reference line/Bar
- Mirroring of camera image
- Focus settings

7.5 Battery

The following applies to the MagniLink PRO models that are equipped with a battery. If the battery charge level falls below 10 or 5%, a red battery symbol is displayed to indicate that it is time to connect the mains adapter and charge the battery. To remove the symbol, press the function control.

Maintenance charging

The MagniLink PRO models with a battery are also equipped with a smart battery charger that uses maintenance charging to keep the battery in good condition. To further extend battery life, we recommend that you use your MagniLink PRO twice a year with just the battery (disconnect the mains adapter) until the battery is completely discharged.

8 Mac software

MagniLink PRO is supplied with the software MagniLink S. The following pages describe the installation and use of MagniLink S for Mac.

8.1 Minimum system requirements

- Mac OS X Version 10.6 Snow Leopard, or later
- 2 integrated USB 2.0 ports
- To use the system in minimum resolution and picture frequency you will need a computer with 2.53 Hz Intel Core 2 Duo processor, 4 GB RAM.

8.2 Recommended system requirements

- Mac OS X Version 10.6 Snow Leopard, or later
- 1 integrated USB 3.0 port
- To use the system in maximum resolution and picture frequency you will need a computer with an i5 or i7 processor, 4 GB RAM-memory, external graphics card with at least 512 MB inbuilt memory.

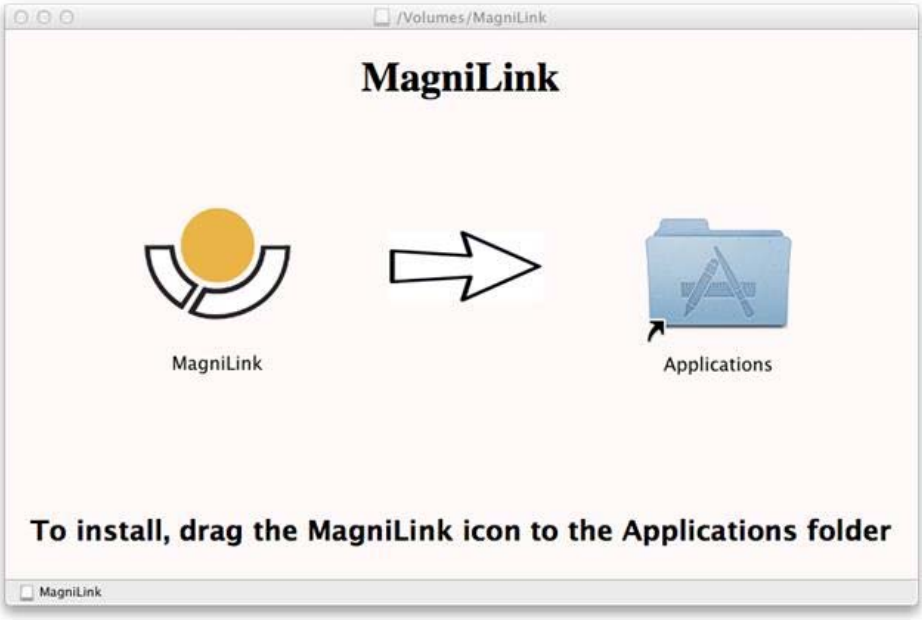
8.3 Installation of software

To install MagniLink S on your Mac, insert the USB stick containing the software into one of the computer's USB ports. Begin the installation by double clicking on the "Software Mac.dmg" file located in the "Software Mac" folder. This will open the following window.

Continue the installation by double clicking the MagniLink.dmg file.

MagniLink.dmg
IMPORTANT – Read this License Agreement carefully before clicking on the "Agree" button. By clicking on the "Agree" button, you agree to be bound by the terms of the License Agreement.
Software License Agreement
This LVI End-User License Agreement ("EULA") is a legal agreement for the LVI MagniLink S Series Product in which this EULA is contained, which includes computer software and printed materials, between you and LVI - Low Vision International (LVI). By installing,
Print
Save...
Disagree
Agree

Read the text in the "License Agreement" dialogue box, and accept the license agreement by clicking the "Agree" button. After clicking "Agree", the following window will open.



To install MagniLink, drag the MagniLink icon to the "Applications" folder. This completes the installation.

8.4 Using the software

8.4.1 Functions via the keyboard

MagniLink Student is presented in a Mac application and all features in the system can be controlled from the keyboard.

If you want to use the standard F1, F2, etc. keys without pressing the (fn) key. You can change the keyboard settings. This setting can be accessed from the Apple menu -> System Preferences -> Hardware -> Keyboard.

Default hotkey settings from the computer keyboard.

fn + F1	Natural colours
fn + F2	Positive picture with increased contrast Artificial colours; White/Black, Yellow/Black, Green/Black, Red/Black, Yellow/Blue, White/Blue Press F2 to toggle through the different colours. (Shift + fn + F2 toggles backwards.)
fn + F3	Negative picture with increased contrast Artificial colours; Black/White, Black/Yellow, Black/Green, Black/Red, Blue/Yellow, Blue/White Press F3 to toggle through the different colours. (Shift + fn + F3 toggles backwards.)
fn + F5	Take snapshot Press fn + F5 to open the Picture saving dialog box. A file name (today's date and time) and folder (MagniLink) is automatically suggested. Just press Enter to save the picture. If you want to save the picture somewhere else or with another name or format (JPG is standard) you can manually change this.
fn + Shift + F5	Take snapshot – fast To save a snapshot picture fast without specifying file name and folder, press fn + Shift + F5. This command will save the snapshot to the MagniLink folder or to the last folder that was selected with F5.
fn + Alt + F5	Start/Stop video recording Press fn + Alt + F5 to open the Video recording dialog box. A file name (today's date and time) and folder (MagniLink) is automatically suggested. Just press Enter to save the video. If you want to save the video somewhere else or with another name or format you can manually change this. Stop the video recording by pressing fn + Alt + F5 once again.

fn + Alt + Shift + F5	**Start video recording – fast** Press fn + Alt + Shift + F5 to start video recording at once, without specifying file name and folder. This command will quick save the video to the MagniLink folder or to the last folder that was used.
fn + F6	**View stored snapshots** Press fn + F6 to view stored pictures. Mark the picture and press Enter or choose open. The picture is normally opened in the standard Mac picture-viewing program, where you can, for example, magnify the picture.
fn + Shift + F6	**View last stored snapshot – fast** Press fn + Shift + F6 to open the last saved snapshot. If no snapshots have been saved during this program cycle, the functionality will be the same as for fn + F6.
fn + Alt + F6	**View stored videos** Press fn + Alt + F6 to view recorded video sequences. Mark the video to view and press Enter or choose Open. The video is opened in the standard video viewer.
fn + Alt + Shift + F6	**View last stored video – fast** Press fn + Alt + Shift + F6 to open the last saved video recording. If no video recording have been saved during this program cycle, the functionality will be the same as for fn + Alt + F6.
fn + F8	**Preset split modes** Press fn + F8 to toggle among the preset split modes. If multiple monitors are used, the split modes will toggle over all monitors, starting with the primary monitor. The window can also be controlled using the mouse or the standard Mac OS X commands.
fn + Alt + F9	**Information and settings window** Pressing fn + Alt + F9 opens up a window in which you can adjust different settings and optimize your MLS. The window contains different headings.
fn + Alt + F11	**Return to default settings** Press fn + Alt + F11 to return to the default settings (normal window, natural colours and normal brightness).
Arrow up	**Zoom in**
Arrow down	**Zoom out**
Alt + O	**Overview** Switches to an overview mode. The camera zooms out and a sight is shown in the middle of the video window. To exit

	overview mode, press the key combination again.
Arrow left	Decrease brightness
Arrow right	Increase brightness
Alt + Arrow left	Guiding line left/up
Alt + Arrow up	Guiding line left/up
Alt + Arrow right	Guiding line right/down
Alt + Arrow down	Guiding line right/down
Alt + A	Toggle “always on top” This key combination will toggle “always on top” for the application window. If this option is activated, the camera application window will be placed above all other application windows that are not set as “always on top”. This will make the camera application window viewable even if the application window does not have focus and would otherwise have been covered by another application window. This, for example, facilitates writing in Word, while viewing the camera image
Cmd + M	Minimizes the application
Alt + R	Rotates the camera picture clockwise Each time you press this key combination the picture rotates 90° (90°, 180°, 270°, 0°).
Shift + Alt + R	Rotates the camera picture counter clockwise Each time you press this key combination the picture rotates 90° counter clockwise (270°, 180°, 90°, 0°).
Alt + I	Mirror camera image By pressing Alt + I, you can mirror the camera image. This is a useful feature if you for example would like to use the camera as a magnifying makeup mirror.
Alt + F	Freeze camera image By pressing this key combination, the camera image is frozen until the key combination is pressed again.
Alt + J	Autofocus on/off Press this key combination to lock the autofocus in the present position. This could be used, for example, when writing by hand without risk of disturbing the focusing system with the hand or the pen. A subsequent press reactivates the autofocus system.

Cmd + ,	**Open the preferences dialog** This key combination is the standard way to open the preferences dialog in a Mac application.
Cmd + ?	**Open the manual** This key combination opens the manual pages in the standard application for viewing pdf-files.

The following functions are only available for cameras that support OCR.

F4	**OCR-process** This command takes a picture for OCR-processing. The program then switches to text view and the OCR-processed text is read aloud. If the text view already contains text, this is replaced by the text from the OCR conversion. It is possible to OCR-process a whole A4 page by turning the paper 90 degrees.
Alt + F4	**Process with OCR and add text** Works like the previous command, but the text from the OCR conversion is added to the existing text.
Alt + S	**Toggle column selector** Activates or deactivates the column selector. When the column selector is active, only those columns that are intersected by the column selector are OCR-processed.
Cmd + C	**Copy text** Copy all text in the text view to the Clipboard. It is then possible to paste the content of the clipboard into another program, such as Word.
Cmd + V	**Paste text** If the user has copied text from another program, this text can be pasted into the text view. This command replaces the existing text.
Cmd + Alt + V	**Paste and add text** Works like the previous command, but the text is added to the existing text.
V	**Switch between camera view and text view** If a text has been OCR-processed, this command switches between camera view and text view.
B	**Display mode** Switches to display mode for OCR-processed text. The available display modes are: Side view, line view, word view and a silent mode where the text moves sideways

on the screen.

1	Start/Pause reading If no reading is currently in progress, reading starts, otherwise reading is paused.
2	Stop reading This command stops the reading. The next reading will begin from the start of the text.
3	Read previous With this command, the user can go backwards through the text. If the reading mode is sentence, you move backwards through the text one sentence at a time. If the reading mode is word, you move backwards through the text word by word. If the reading mode is set to character, one character is read for each keystroke.
4	Read next With this command, the user can move forward in the text. If the reading mode is sentence, you move forward through the text one sentence at a time. If the reading mode is word, you move forward through the text word by word. If the reading mode is set as character, one character is read for each keystroke.
5	Switch reading mode This command selects the reading mode that is to be employed when the "Read previous/next" command is entered. There are three modes: sentence, word and character.
6	Slower Reduces the reading speed.
7	Faster Increases the reading speed.
8	Reduce volume Reduces the volume of the voice.
9	Increase volume Increases the volume of the voice.
0	Next voice Switches to the next installed voice. This command also changes the OCR engine's language to the new voice's language.

8.4.2 Gestures

If the computer is equipped with a multi-touch pad, some functionality can be controlled from the touchpad.

Zoom
Place two fingers on the touchpad; pinch to zoom out and expand to zoom in.

Rotate camera image
Place two fingers on the touchpad and do a rotating motion to rotate the camera image.

8.4.3 Information and settings window

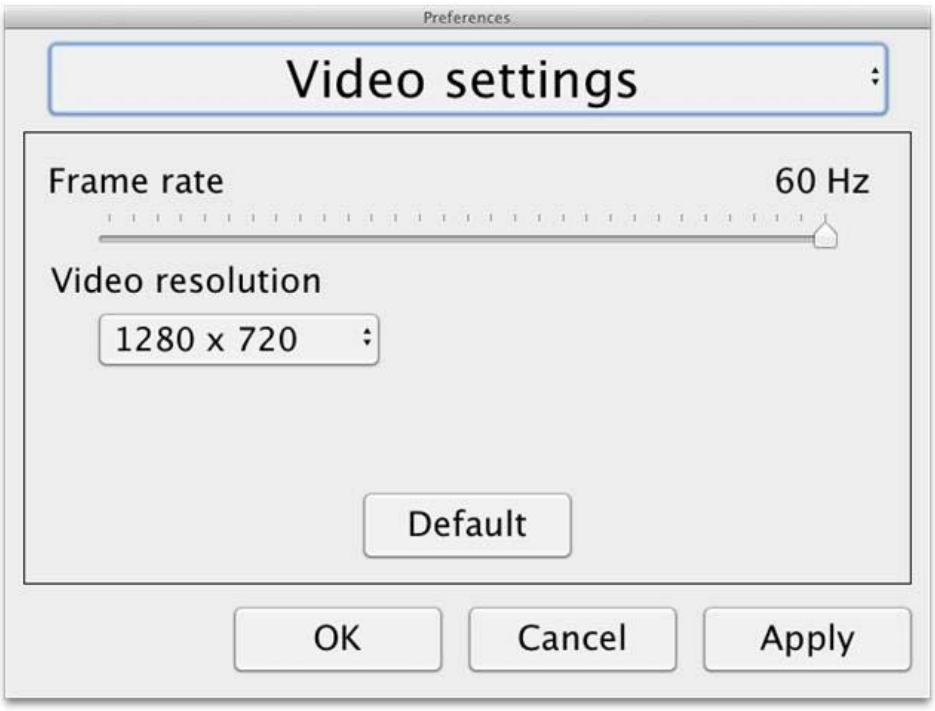
The information and settings window consists of different headings that all contain either application information or application settings options.

8.4.3.1 About the application

Preferences
About
Low Vision International
LVI MagniLink Version 2.0
MagniLink S TTS – Text To Speech
Serial: 000007
Nuance™ OCR © 1994–2014 Nuance Communications All Rights reserved
This program is protected by copyright law. Unauthorized reproduction or distribution of this program may result in civil and criminal penalties.
OK
Cancel
Apply

This heading contains the version number of your software and information regarding copyright law. It is also possible to activate the OCR-functionality here if there is no internet connection available. Press “OCR Activation” and a dialog will appear where you can select the license file located on the USB-stick.

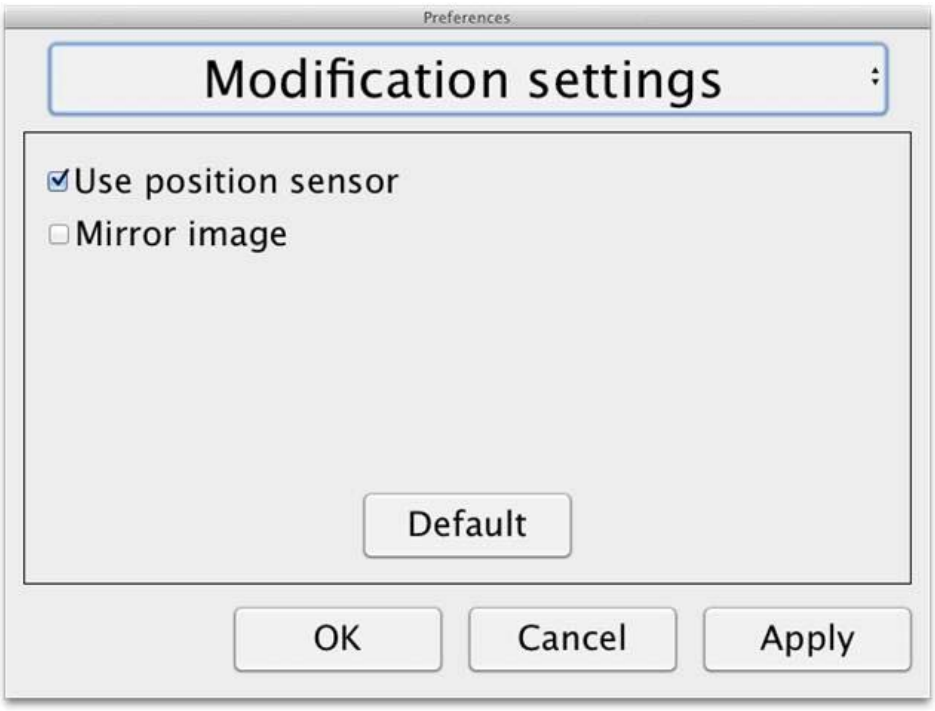
8.4.3.2 Video Settings



Frame rate
Allows you to limit the camera's frame rate.

Resolution
Allows you to set the camera's resolution. The number of possible resolutions depends on the camera and whether it is connected to a USB-3 or USB-2 port. Higher resolution means a clearer picture, but can result in a lower frame rate.

8.4.3.3 Modification Settings



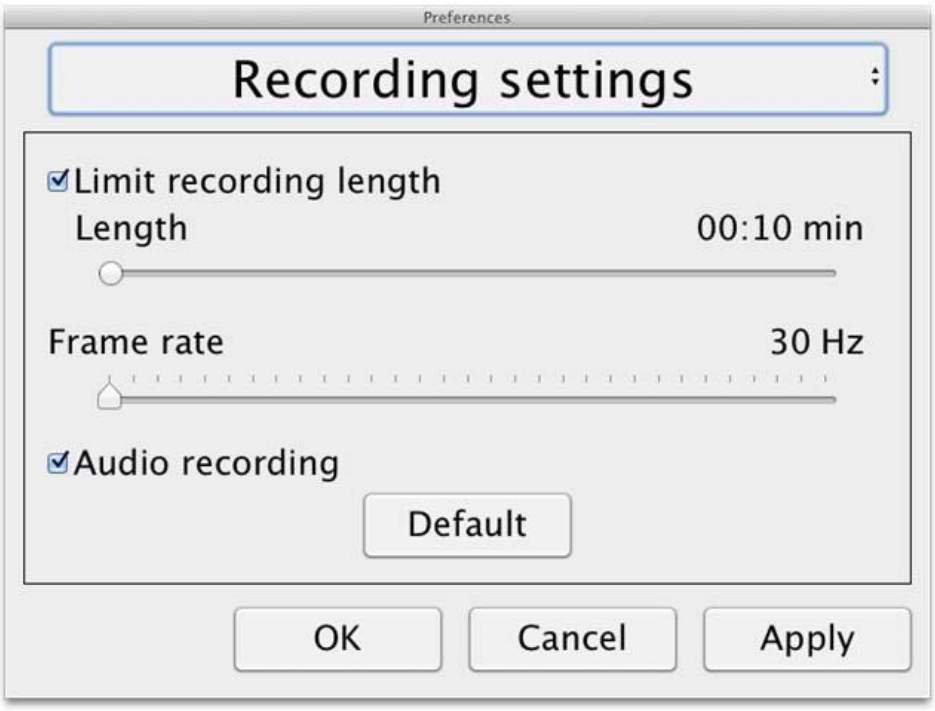
Use positioning sensors

When this setting in activated, the application remembers the settings for distance mode and reading mode. See the Position sensor section for more information.

Mirrored image

When this setting is activated, the camera image is mirrored.

8.4.3.4 Recording Settings



Limit recording length

The video recording can be limited in steps of one second from 10 seconds up to 10 minutes. If “Limit recording length” is unchecked, then the video recording length is unlimited, which means that the video recording will continue until it runs out of disk space or is stopped manually. Even if the video recording length is unlimited it will not be possible to record more than 60 minutes per video file.

Frame rate

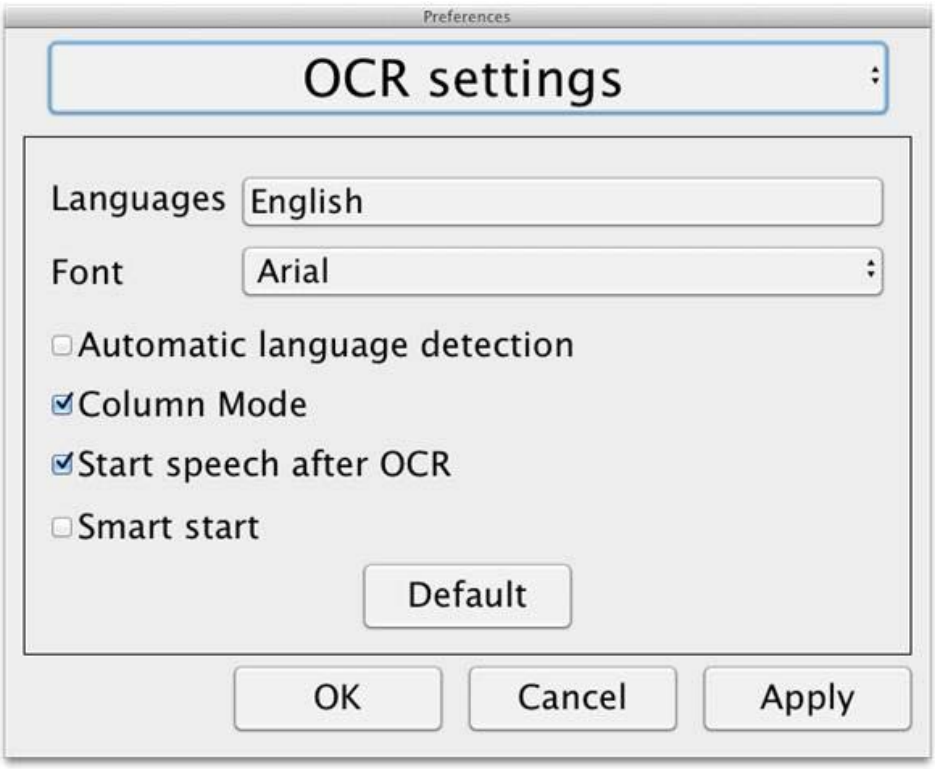
The recording frame rate can be set between 30 and 60 frames per second. A lower frame rate provides lower quality video, but will take less space on the hard disk.

Audio recording

If the computer is equipped with a microphone (internal or external) sound can be added to the video recording by activating this setting.

8.4.3.5 OCR settings

This heading is only available if the camera supports OCR.



Languages

Makes it possible to change the languages that the OCR engine is to interpret. It is possible to select several languages. To achieve a good result, it is important that the languages set is the same as that used in the text.

Typeface

Here the user can set the typeface used for viewing text that has been OCR-processed. The typeface in use has no effect on the OCR-processing.

Automatic language detection

When this function is active, the application will try to detect the language of the text and change the voice to the detected language. The application will only attempt to identify among selected languages and only wors for English, Swedish, Norwegian, German, Danish, Dutch, Spanish, Finnish and French. If a text on a different language is to be OCR-processed, then this function needs to be deactivated.

Column mode

When this setting is active, the OCR engine processes the text in columns, which is appropriate if it is a newspaper text that is to be processed.

Start speech after OCR

If this box is ticked, text will automatically be read aloud after an image has been OCR-processed.

Smart start

Smart start works as follows. If a text has already been read aloud and a new OCR conversion is starting, the reading will start from the position where the reading of the old text stopped.

8.4.3.5.1 Quality of OCR processing

In order to optimize the results of the OCR conversion, you should bear in mind the following.

- Ensure the magnification is sufficient. Very small text produces poor results in the OCR software. A minimum of 12pt is recommended for the lowest magnification on the reading camera.
- Avoid glossy paper as this results in reflections in the image. This impairs the results of the OCR conversion. If you intend to use glossy paper, we recommend that the light on the unit is switched off.
- Certain fonts can be difficult for the OCR engine to interpret.
- It is important that the text contrast is sufficient.
- It is important that the OCR engine's language is the same as that of the text.
- The camera's resolution should be set to at least 1280x720, see Video settings for more information.

8.4.3.6 Speech Settings

This heading is only available if the camera supports OCR.

Voice
Here the user can select among all available voices.

Volume
Set the sound level for the voice.

Speed
Set the speed of the voice.

8.5 Download voices

In Mac OS X 10.7 or later, it is possible to download voices for different languages. Go to "System Preferences" -> "Dictation and Speech" (The exact name and look of the dialogs can vary some depending on the version of Mac OS X).

Choose the tab "Text to Speech", click on "System voice" and select "Customize".

Check to voices you wish to download and click OK.

9 Ergonomics

Your reading camera is now ready to use. It is important that the workplace around your MagniLink is comfortable, and that you sit correctly. This is so that you can use the camera for as long as possible without putting undue strain and stress on your neck and back.

You should bear the following in mind:

- Your chair should be positioned close to the table on which the equipment is located, and you should not sit in the chair for too long. We recommend a good office chair with adjustable height.
- The seat of the chair should be at a height that does not cause your legs to become numb; legs should be at an angle of 90 degrees and you should rest your feet on the floor.
- The reading table should be at a height at which you can rest your lower arm horizontally on it. It is important that the table is neither too high nor too low for you. The ideal solution is if the screen is slightly below eye level and in as straight a line in front of you as possible.
- Shield off daylight. Lights in the ceiling, table lamps and light from windows can cause reflections on the monitor. For this reason, avoid placing lights where they shine directly at the screen or at yourself.
- If you use the device for long periods of time, there is a risk of repeated movements causing you pain in your neck, shoulders and back. Your eyes can also get tired from looking at a screen for too long.

10 Troubleshooting

No image is displayed on the screen after you start the system:

- Check that the power is on.
- Check that all connectors are properly connected as explained in the 'Installation' section.

The LED shines red for five seconds.

- The battery needs to be charged. Connect the mains adapter to the units to charge the battery.

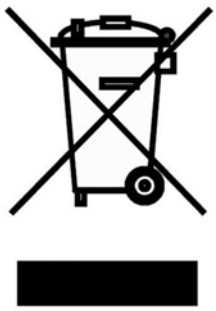
It is not possible to start the system and the On/Off button flashes (orange/red).

- Press the On/Off button for more than six seconds to reset the system.

Never remove any panels or the casing in order to attempt to repair the system yourself. In the event of problems, contact your local dealer.

11 Technical information

Magnification, reading camera	1.1-70x (23" screen)
Camera resolution	Full HD (1920x1080)
Monitor, resolution	1366x768 (18.5") widescreen (16:9) 1920x1080 (23") widescreen (16:9)
Computer, resolution	1280x720, 60Hz 1920x1080 30 Hz
Battery, operating time	5-9 hours
Battery, charging	2.5 hours
Battery, warranty period	1 year
Dimensions, collapsed	33x47x17 cm (13x18.5x6,7 in)
Dimensions, opened up	33x38x52 cm (13x15x20,5 in)
Weight	4.2 kg (9 lb 15 oz)
Power source	Battery or AC
Acceptable temperature ranges	Transport and storage -20°C - +60°C 68°F - 140°F Operation: +5°C – +35°C 41°F - 95°F



Disposal of old electrical and electronic equipment (applies for EU countries and all other European countries that have specific collection systems)

If the product or its packaging has this symbol on it, it is not to be handled as regular domestic waste. It should instead be deposited at a suitable collection centre for the recycling of electrical and electronic equipment. By ensuring that this product is properly taken care of, you are helping to prevent the negative impact on health and the environment that might otherwise result from inappropriate disposal of this product. Recycling helps in the management of our natural resources. For more detailed information regarding the recycling of this product, you can contact your municipality, your waste management company or the store where you purchased the product.

12 Declaration of Conformity

DECLARATION OF CONFORMITY

according to the Medical Devices Directive, 93/42/EEC with amendments from directive 2007/47/EC

Type of equipment:	*Reading Aid*
Brand name or trademark:	*MagniLink*
Type designation:	***MLPRO-FHD-***
Product class:	*Class 1.*
Manufacturer:	*LVI Low Vision International AB*
Address:	*Verkstadsgatan 5* *S-352 46 Växjö* *Sweden*
Web:	http://www.lvi.se
Phone: Fax:	*+46 470 - 72 77 00* *+46 470 - 72 77 25*

As the manufacturer, we declare under our sole responsibility that:

- the product complies with the provisions of the Council Directive 93/42/EEC with amendments from directive 2007/47/EC.
- we will keep the technical documentation described in section 3 of Annex VII available to the national authorities for a period ending at least five years after the last product has been manufactured.
- the device meets the Essential Requirements of Annex 1 which applies to it, taking into account the intended purpose of the device.
- to follow the requirements regarding products placed on the market as described in section 4 of Annex VII.

☒ Manufacturer ☐ Manufacturer´s authorized representative

Date	Signature	Position
2015-09-30		Managing Director

Clarification

Erik Bondemark

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